



**BILLING CODE: 3510-22-P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**[RTID 0648-XA305]**

**Endangered and Threatened Species; Take of Anadromous Fish**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; applications for 17 permit renewals, 1 permit modification, and 2 new permits.

**SUMMARY:** Notice is hereby given that NMFS has received 20 scientific research permit application requests relating to Pacific salmon and steelhead, eulachon, and green sturgeon. The proposed research is intended to increase knowledge of species listed under the Endangered Species Act (ESA) and to help guide management and conservation efforts. The applications may be viewed online at:

[https://apps.nmfs.noaa.gov/preview/preview\\_open\\_for\\_comment.cfm](https://apps.nmfs.noaa.gov/preview/preview_open_for_comment.cfm).

**DATES:** Comments or requests for a public hearing on the applications must be received at the appropriate address (see **ADDRESSES**) no later than 5 p.m. Pacific Standard Time on *[insert date 30 days after date of publication in the **FEDERAL REGISTER**]*.

**ADDRESSES:** Because all West Coast NMFS offices are currently closed, all written comments on the applications should be sent in by e-mail to [nmfs.wcr-apps@noaa.gov](mailto:nmfs.wcr-apps@noaa.gov) (please include the permit number in the subject line of the email).

**FOR FURTHER INFORMATION CONTACT:** Rob Clapp, Portland, OR (ph.: 503-231-2314), e-mail: *Robert.Clapp@noaa.gov*). Permit application instructions are available from the address above, or online at <https://apps.nmfs.noaa.gov>.

**SUPPLEMENTARY INFORMATION:**

**Species Covered in This Notice**

The following listed species are covered in this notice:

Chinook salmon (*Oncorhynchus tshawytscha*): Threatened Lower Columbia River (LCR); threatened Puget Sound (PS); threatened Snake River (SnkR) spring/summer-run; threatened Upper Willamette River (UWR); threatened California Coastal (CC); Threatened Central Valley spring-run (CVS); Endangered Sacramento River winter-run (SacR).

Steelhead (*O. mykiss*): Threatened Middle Columbia River (MCR); Threatened LCR; Threatened UWR; threatened PS; threatened UCR; threatened Central California Coast (CCC); threatened California Central Valley (CCV); threatened Northern California (NC); threatened South-Central California Coast (SCCC); endangered Southern California (SC), Deschutes River steelhead non-essential population (NEP).

Chum salmon (*O. keta*): Threatened Columbia River (CR).

Coho salmon (*O. kisutch*): Threatened LCR; threatened Southern Oregon/Northern California Coast (SONCC); threatened CCC.

Eulachon (*Thaleichthys pacificus*): Threatened southern (S).

Green Sturgeon (*Acipenser medirostris*): Threatened southern (S).

**Authority**

Scientific research permits are issued in accordance with section 10(a)(1)(A) of the ESA (16 U.S.C. 1531 *et. seq*) and regulations governing listed fish and wildlife permits (50 CFR 222-226). NMFS issues permits based on findings that such permits: (1) are applied for in good faith; (2) if granted and exercised, would not operate to the disadvantage of the listed species that are the subject of the permit; and (3) are consistent with the purposes and policy of section 2 of the ESA. The authority to take listed species is subject to conditions set forth in the permits.

Anyone requesting a hearing on an application listed in this notice should set out the specific reasons why a hearing on that application would be appropriate (see **ADDRESSES**). Such hearings are held at the discretion of the Assistant Administrator for Fisheries, NMFS.

### **Applications Received**

*1336-9R*

Port Blakely Tree Farms is seeking to renew for five years a permit that currently allows it to take juvenile UWR Chinook salmon, LCR Chinook salmon, LCR coho salmon, UWR steelhead and LCR steelhead in headwater streams in western Oregon and Washington. The purpose of the research is to evaluate factors limiting fish distribution and water quality in streams on land that Port Blakely Tree Farms owns and manages. The research would benefit listed salmonids by producing data to be used in conserving the species and restoring critical habitat. Port Blakely Tree Farms proposes to capture (using backpack electrofishing and dipnetting), handle, and release juvenile fish. The researchers do not intend to kill any fish being captured but a small number may die as an unintended result of the research activities.

The Lodi office of the U.S. Fish and Wildlife Service (USFWS) is seeking to renew for five years a permit that allows them to annually take adult and juvenile SacR winter-run Chinook salmon, CVS Chinook salmon, CCV steelhead, and Southern DPS green sturgeon while conducting research at long-term monitoring sites in the Sacramento River, San Joaquin River, San Joaquin Delta, San Pablo Bay, San Francisco Bay, Suisun Bay, and the Cache Slough complex in the California Central Valley as well as the San Joaquin Valley and San Francisco Estuary in California. Fish would be captured (Kodiak trawl, midwater trawl, beach seine, zooplankton net, larval net, gillnet, fyke net, purse seine, light trap, and boat electrofishing), handled (weighed, measured, and checked for marks or tags), and released. A subsample of adult and juvenile fish from any of the stated species would be marked, tagged, and/or sampled for biological tissue. Subsamples of hatchery-origin juvenile Sacramento River winter-run and Central Valley spring-run Chinook salmon and larval southern DPS green sturgeon will be lethally sampled for coded wire tag collection or larval fish species identification, respectively. The purpose of the research is to collect scientific data to evaluate and monitor: (1) abundance, temporal and spatial distribution, and survival of salmonids and other fishes in the Sacramento and San Joaquin rivers and San Francisco Estuary; (2) occurrence and habitat use of fishes within the Liberty Island and Cache Slough Complex; (3) relative gear efficiency for all Interagency Ecological Program fish survey nets; (4) juvenile Chinook Salmon littoral habitat use in the Delta; (5) abundance and distribution of Delta Smelt; (6) length-at-date race criteria of winter-run sized and larger Chinook Salmon; (7) winter- and spring-run sized Chinook Salmon floodplain usage in the Yolo Bypass; and

(8) salmonid genetics. The resulting data would be used to quantify the timing, distribution, and survival of salmon and steelhead migrating through the Delta. This information is imperative to understanding the complex interactions among water operations, abiotic and biotic conditions in the Delta, and population dynamics of species of management concern. The researchers are proposing to kill a subset of larval and hatchery-origin juvenile ESA-listed fish and, though it is not intended, a small number of juveniles and adults of all salmon and steelhead species may also be killed as an inadvertent result of the proposed sampling activities.

*14516-3R*

San Jose State University is seeking to renew for five years a permit that currently allows them to annually take juvenile and adult CCC coho salmon and steelhead while conducting research in Gazos Creek, Waddell Creek, Scott Creek, Pescadero Creek Lagoon, and San Gregorio Lagoon on the central coast of California. Fish would be captured (by using beach seines and backpack electrofishing), handled (weighed, measured, and checked for marks or tags), and released. A subsample of juvenile and all adult fish from both species would be marked and/or sampled for biological tissues. Carcasses would also be measured and sampled for biological tissues during spawning surveys. The purpose of the research is to continue monitoring coho salmon and steelhead year-to-year abundance, habitat utilization patterns, growth rates, and relative abundance among rearing life-history patterns. The resulting data would be used to guide management actions (including hatchery smolts releases) and help evaluate the relative importance of habitat types and how the interaction between coho salmon and steelhead

affects juvenile rearing. The researchers are not proposing to kill any fish, but a small number of juveniles may be killed as an inadvertent result of these activities.

*14808-5R*

The California Department of Fish and Wildlife (CDFW) is seeking to renew for five years a permit that currently allows them to annually take juvenile and adult SacR winter-run Chinook salmon, CVS Chinook salmon, CCV steelhead, and southern DPS green sturgeon while conducting research in the Sacramento River in the California Central Valley. Fish would be captured (by using rotary screw traps, fyke traps, and beach seines), handled (weighed, measured, and checked for marks or tags), and released. The majority of the juvenile and adult fish from all species would be marked and/or sampled for biological tissues and a subsample would be anesthetized and tagged (PIT, elastomer, or acoustic tag). A further a subsample of hatchery-origin juvenile SacR Chinook salmon would be intentionally lethally taken for coded wire tag recovery. Juvenile and adult Chinook salmon and steelhead from species would also be observed through snorkel and video/DIDSON surveys. The purpose of the research is to monitor—in real time—juvenile salmonids outmigration. It is also intended to evaluate how environmental conditions affect downstream juvenile movement, estimate steelhead population abundance, trends, and spatial distribution in the Central Valley, and document spawning activity and relative abundance of juvenile salmonids in recently restored habitat. The resulting data would be used to help manage downstream gates and water intakes in ways designed to reduce juvenile entrainment. The data would also be used to help managers develop recommendations for steelhead monitoring programs in support of species recovery and evaluate restoration project outcomes. The researchers

are proposing to kill a subset of hatchery-origin juvenile ESA-listed fish captured, and a small number of juveniles of all species may be killed as an inadvertent result of sampling activities. The researchers are not proposing to kill any adult fish, but a small number may be killed as an inadvertent result of these activities.

*15215-2R*

The CDFW is seeking to renew for five years a permit that currently allows them to annually take juvenile and adult SacR winter-run Chinook salmon, CCC coho salmon, and SC steelhead anywhere in the State of California and its waters. This permit only allows the CDFW researchers to take dead or moribund fish in the event of an observed fish die-off. Dead or moribund fish found during such an event would be collected and tissue-sampled. Animals determined to be moribund due to such an event would be collected by hand- or dip-net and euthanized before being tissue-sampled. The collected tissue samples would be evaluated for pathogens, immunological response, or DNA testing. The purpose of the research is to understand the role of disease when fish die-off events occur. Data identifying die-off causes would be used to inform fishery and water resource management in ways designed to help avoid future such events. The researchers are not proposing to capture or kill any healthy live fish; only dead fish and those that CDFW pathologists or veterinarians determine are severely compromised and unlikely to survive would be taken.

*15390-2R*

The Resource Conservation District (RCD) of the Santa Monica Mountains is seeking to renew for five years a permit that currently allows them to annually take juvenile and adult SC steelhead in Topanga Creek and Malibu Creek in Los Angeles

County, California. Fish would be captured (by using backpack electrofishing, fyke traps, and minnow traps), handled (weighed, measured, and checked for marks or tags), and released. A subsample of juveniles would be anesthetized, PIT-tagged, and sampled for biological tissues or stomach contents. The purpose of the research is to document the status of the population of Southern California steelhead in the coastal creeks of Santa Monica Bay, understand outmigration patterns, identify habitat constraints and restoration opportunities, and identify pathogens or diseases related to fish die-off events. The resulting data would be used to evaluate smolt production, recruitment, and seasonal habitat use in Topanga Creek and assess the contribution of various pathogens and diseases to mortality in Malibu creek. The researchers are not proposing to kill any fish, but a small number of juveniles may be killed as an inadvertent result of these activities.

*16122-3R*

The Colville Confederated Tribes (CCT) are seeking to renew for five years a permit that currently allows them to take juvenile UCR steelhead in the Okanogan River, Washington. The purpose of the research is to monitor steelhead populations in the basin. The researchers are seeking to estimate natural production and productivity and calculate annual population estimates, egg-to-emigrant survival, and emigrant-to-adult survival rates. The population estimates would be used to evaluate the effects of supplementation programs in the Okanogan River Basin and provide managers with the data they need to determine spawning success. The research would benefit the fish by giving state and Federal managers information on UCR steelhead status and the degree to which they are being affected by supplementation programs in the area. The fish would be captured at screw trapping sites on the Okanogan River. All captured fish would be



identified and checked for marks and tags. A subsample of selected fish would be measured and weighed before being released back into the Okanogan River. A further subsample would be marked with a brown dye, released upstream of the screw traps, and recaptured for the purpose of determining trap efficiency. The researchers do not intend to kill any listed salmonids, but a small number may die as an unintended result of the activities.

*16290-4R*

The Oregon Department of Fish and Wildlife (ODFW) is seeking to renew for five years a permit that currently authorizes them to take listed salmonids while conducting research on the Oregon Chub. The purpose of the research is to study the distribution, abundance, and factors limiting the recovery of Oregon chub. The ODFW would capture, handle, and release juvenile UWR Chinook salmon, UWR steelhead, LCR Chinook salmon, LCR steelhead, LCR coho salmon, and CR chum salmon while conducting the research. The Oregon chub is endemic to the Willamette Valley of Oregon and the habitats it depends on are important to salmonids. Research on the Oregon chub would benefit listed salmonids by helping managers recover habitats that the species share. The ODFW researchers would use boat electrofishing equipment, minnow traps, beach seines, dip nets, hoop nets, and fyke nets to capture juvenile fish. Researchers would avoid contact with adult fish. If listed salmonids are captured during the research they would be released immediately. The researchers do not expect to kill any listed salmonids but a small number may die as an unintended result of the research activities.

*16417-3M*

The Santa Clara Valley Water District is seeking to modify a permit that allows them to annually take juvenile and adult CCC steelhead and juvenile SCCC steelhead in the Guadalupe River, Coyote Creek, and Stevens Creek Watershed (Guadalupe Creek, Alamitos Creek, Calero Creek, Los Gatos Creek, Guadalupe River, Stevens Creek, Coyote Creek, and Upper Penitencia Creek), Pajaro Watershed (Pacheco Creek, Cedar Creek, North Fork Pacheco Creek, Middle Fork Pacheco Creek, South Fork Pacheco Creek, Hagerman Canyon, Uvas Creek, LLagas Creek, Bodfish Creek, Little Arthur Creek, Tar Creek, and Solis Creek), and Lake Almaden in North Santa Clara County, California. In addition to the currently authorized take, the applicants are requesting additional take of juvenile CCCC steelhead and juvenile SCCC steelhead. Fish would be captured (by using backpack electrofishing, boat electrofishing, and beach seines), handled (weighed, measured, and checked for marks or tags), and released. A subsample of juveniles would be anesthetized, PIT-tagged, and sampled for biological tissues. No additional take is being requested for adult fish. The purpose of the research is to collect data on steelhead distribution, habitat use, survival rates, and movements. The resulting data would be used to fill knowledge gaps regarding steelhead distribution and relative abundance in Santa Clara County and help better align water district operations and fisheries management. The researchers are not proposing to kill any fish, but a small number of juveniles may be killed as an inadvertent result of these activities.

*17063-3R*

The U.S. Forest Service is seeking to renew for five years a permit that currently allows them to annually take juvenile SONCC coho salmon, NC steelhead, and CC Chinook salmon in the Mad River, Lower Eel River, Van Duzen River, and Weaver

Creek drainage in the Mad-Redwood, Lower Eel, and Trinity River sub-basins of coastal Northern California. Fish would be captured (by using backpack electrofishing), handled (anesthetized, weighed, measured, and checked for marks or tags), and released. A subsample of SONCC coho would be PIT-tagged. The purpose of the research is to continue building long-term physical and biological data sets that would be used to develop an individual-based model of anadromous salmonids in Weaver Creek and monitor the distribution of non-native speckled dace in the Mad River and Eel River drainages. The resulting data would be used to assess the effectiveness of habitat restoration projects completed in recent years and study why speckled dace have not expanded their range in the Eel River. The researchers are not proposing to kill any fish, but a small number of individuals may be killed as an inadvertent result of these activities.

*17272-2R*

The U.S. Fish and Wildlife Service is seeking to renew for five years a permit that currently allows them to annually take juvenile and adult SONCC coho salmon in the mainstem Klamath River in Northern California. Adult fish would be observed during spawning surveys, and tissue samples would be collected from spawned adult carcasses. Juvenile fish would be captured (by using rotary screw traps, fyke traps, and beach seines), handled (weighed, measured, and checked for marks or tags), and released. The purpose of the research is to assess population status, health, habitat use, and mechanisms influencing disease in fish populations of the Klamath River Basin. The resulting data would be used to help managers understand the effects of flow and temperature conditions and timing on disease, the importance of specific habitats to aquatic species,

the response of aquatic habitats to restoration actions, and how aquatic habitat is affected by human interaction. The researchers are not proposing to kill any fish, but a small number of juvenile fish may be killed as an inadvertent result of these activities.

*17867-2R*

The Humboldt Redwood Company (HRC) is seeking to renew for five years a permit that currently allows them to annually take juvenile and adult SONCC coho salmon, NC steelhead, and CCC Chinook salmon in the Lower Eel River, Van Duzen River, Freshwater Creek, Elk River, Mattole River, and Bear River in Humboldt County, California. Adult and juvenile fish would be observed via snorkel survey, and a subset of juvenile SONCC coho and NC steelhead would be captured (by using backpack electrofishing), handled (weighed, measured, and checked for marks or tags), and released. The purpose of the research is to determine the occurrence, distribution, population abundance, and habitat conditions of listed salmonids on HRC lands. The resulting data would be used to monitor, protect, restore and enhance the anadromous fishery resources in watersheds owned by HRC. The researchers are not proposing to kill any fish, but a small number of juvenile fish may be killed as an inadvertent result of these activities.

*17877-3R*

The U.S. Bureau of Reclamation is seeking to renew a permit that allows them to annually take juvenile and adult SONCC Coast coho salmon in the Trinity River and its tributaries in Trinity and Humboldt counties, California. Adult fish would be observed via snorkel surveys or spawning surveys, and tissue samples would be collected from carcasses found during spawning surveys. A small number of adults would be captured

(by using barbless hook and line angling) when the researchers engage in sampling that targets invasive brown trout. Any listed fish caught in this manner would immediately be released. Juvenile coho salmon would also be observed via snorkel surveys and a subset would be captured (by using rotary screw traps, boat electrofishing, fyke traps, minnow traps, beach seines, and hand-netting during snorkel surveys), handled (anesthetized, weighed, measured, and checked for marks or tags), and released. A subsample of captured fish would be anesthetized and PIT-tagged prior to release. The purpose of the research is to assess juvenile salmonid abundance, run timing, length, weight, condition, health, habitat utilization, movement patterns, and growth, as well as to estimate the natural mainstem Trinity River spawning escapement and investigate the potential impacts of predation and competition by invasive brown trout. The resulting data would be used to (a) determine the relative value of habitat and its use where restoration projects are considered, (b) support development of a salmon production model for use in restoration planning, and (c) evaluate restoration effectiveness to determine if expected habitat improvements are being realized. The researchers are not proposing to kill any fish, but a small number of juveniles may be killed as an inadvertent result of these activities.

*Permit 18921-2R*

The Samish Indian Nation Department of Natural Resources (SINDNR) is seeking to renew for five years a research permit that currently allows it to annually take juvenile PS Chinook salmon and PS steelhead. The SINDNR research may also cause them to take adult S eulachon, for which there are currently no ESA take prohibitions. The sampling would take place in the marine waters adjacent to Cypress Island (of the

San Juan Island archipelago) in Secret Harbor (Skagit County, WA). Secret Harbor restoration (2008-2018) involved the restoration of an agricultural field to its historical form by breaching an existing tidal dike, restoring tidal exchange and freshwater stream connectivity to the area, and replacing invasive plant species with native vegetation. The restored estuary and salt marsh habitats are expected to enhance and improve structural habitat complexity and potentially support a greater diversity of species. The purpose of the study is to determine fish presence both within and around the Secret Harbor estuary restoration site to continue studying the effectiveness of the restoration efforts. This research would benefit the affected species by informing future restoration designs and providing data to support future enhancement projects. The SINDAR proposes to capture fish by using beach seines during year-round monthly sampling events. Fish would be captured, identified to species, measured, and released. The researchers do not propose to kill any of the listed fish being captured, but a small number may die as an unintended result of the activities.

*18937-3R*

The Scripps Institute of Oceanography is seeking to renew a permit that allows them to annually take juvenile and adult CC Chinook salmon, CCC coho salmon, and CCC steelhead in tributaries of the Russian River in Mendocino and Sonoma counties, California. Adult fish would be observed via snorkel surveys or spawning surveys, and tissue samples would be collected from carcasses found during spawning surveys. If any adults were to be unintentionally captured in juvenile sampling gear, they would immediately be released. Juvenile fish would also be observed via snorkel surveys and a subset would be captured (by using backpack electrofishing, hand- or dip-nets,

funnel/pipe traps, and minnow traps), handled (anesthetized, weighed, measured, and checked for marks or tags), and released. A subsample would be anesthetized and PIT-tagged, have tissue samples taken, or have stomach contents sampled (non-lethally). The purpose of the research is to estimate salmonid population metrics such as abundance, survival, growth, and spatial distribution of multiple life stages in the Russian River watershed. The resulting data would be used to provide resource agencies with information relating to population metrics and thereby help them plan recovery actions such as hatchery releases, habitat enhancement projects, and stream flow improvement projects. The researchers are not proposing to kill any fish, but a small number of juveniles and post-spawn steelhead (kelts) may be killed as an inadvertent result of these activities.

#### *19121-2R*

The U.S. Geological Survey is seeking to renew a permit that allows them to annually take juvenile and adult SacR winter-run Chinook salmon, CVS spring-run Chinook salmon, CVS steelhead, and adult southern DPS green sturgeon in the north San Francisco Bay Delta (including the general Cache Slough complex, Little Holland Tract, and the Sacramento Deep Water Shipping Channel) downstream to the upper San Francisco Estuary in the vicinity of Suisun Bay in the San Francisco Estuary and Sacramento-San Joaquin Delta, California. Salmonids would be captured (by using boat electrofishing, fyke nets, gill nets, zooplankton nets, midwater trawls, otter trawls, and beach seines), handled (weighed, measured, and checked for marks or tags), and released. Any green sturgeon adults captured as a result of longline sampling would be anesthetized, PIT-tagged, and would be sampled for biological tissues prior to release.

The purpose of this research is to study how physical and biological factors relate to fish assemblages and populations—particularly with regard to the distribution of delta smelt in tidal wetlands in the San Francisco Estuary and Delta. The resulting data would be used to address potential benefits of habitat restoration, specifically by identifying habitat characteristics in restored sites that are associated with plankton production sufficient to establish a food web supporting native fish populations. The data would also help researchers develop new research tools for studying delta smelt. The researchers are not proposing to kill any ESA-listed fish, but a small number of adult and juvenile fish may be killed as an inadvertent result of these activities. In addition, a small number of juvenile non-ESA listed (*i.e.*, fall-run) Chinook salmon would also be intentionally sacrificed for stomach contents analysis, and a small number of juvenile CVS spring-run Chinook salmon may be killed as part of this effort in the unlikely event that they are misidentified.

*19320-2R*

NOAA's Southwest Fisheries Science Center is seeking to renew for five years a permit that currently allows them to take juveniles and sub-adults from 10 species of listed salmonids: CC Chinook salmon, CVS Chinook salmon, LCR Chinook salmon, SacR winter-run Chinook salmon, SR spring/summer Chinook salmon, CCC coho salmon, SONCC coho salmon, CVS steelhead, CCC steelhead, and NC steelhead. The fish would primarily be captured by surface trawling, however beach seining may also occasionally be used. Sub-adult salmonids (*i.e.*, all salmon larger than 250 mm) that survive capture would have fin tissue and scale samples taken and then be released. All sub-adult salmonids that do not survive capture and all captured juvenile salmonids (*i.e.*,



fish larger than 80 mm but less than 250 mm) would be lethally sampled (*i.e.*, intentional directed mortality) in order to collect: (1) otoliths for age and growth studies; (2) coded wire tags for origin and age (hatchery fish); (3) muscle tissues for stable isotopes and/or lipid assays; (4) stomachs and contents for diet studies; and (5) other tissues including the heart, liver, intestines, and kidney for special studies upon request.

The research is intended to generate a great deal of information. It is designed to help scientists and managers: (1) determine the inter-annual and seasonal variability in growth, feeding, and energy status among juvenile salmonids in the coastal ocean off northern and central California as well as southern Oregon; (2) determine migration paths and spatial distribution among genetically distinct salmonid stocks during their early ocean residence; (3) characterize the biological and physical oceanographic features associated with juvenile salmon ocean habitat from the shore to the continental shelf break; (4) identify potential links between coastal geography, oceanographic features, and salmon distribution patterns; and (5) identify and test ecological indices for salmon survival. This research would benefit listed fish by informing comprehensive lifecycle models that incorporate both freshwater and marine conditions and recognize the relationship between the two habitats. It would also identify and predict sources of salmon mortality at sea and thereby help managers develop indices of salmonid survival in the marine environment.

*19437-2R*

The University of California at Davis is seeking to renew for five years a permit that currently allows them to annually take juvenile and adult SacR winter-run Chinook salmon, CVS Chinook salmon, CCV steelhead, and southern DPS green sturgeon in the

Cache-Lindsey complex, Sherman Lake complex, and Suisun Marsh in the Sacramento-San Joaquin Delta and San Francisco Estuary, California. Fish would be captured (by using boat electrofishing, otter trawls, and beach seines), handled (weigh, measure, and check for marks or tags), and released. Green sturgeon adults will also be scanned for PIT tags and may be sampled for biological tissues before being released release. The purpose of this research is to develop better understanding of how physical and biological habitat features (such as flow and other factors) interact to maintain assemblages of native and non-native species in the upper San Francisco Estuary—particularly in shallow water and marsh habitat. The resulting data would be used to help managers (a) understand how fishes commonly inhabiting Suisun Marsh use the Sacramento River corridor to access habitats in other parts of the estuary, (b) model fish abundance, (c) guide restoration projects to support native fishes, and (d) evaluate the response of the Delta ecosystem to drought. The researchers are not proposing to kill any fish, but a small number of juvenile salmon and steelhead may be killed as an inadvertent result of these activities.

23649

Mount Hood Environmental is seeking a five-year permit that would allow them to annually take juvenile MCR steelhead from a non-essential experimental population in the Crooked River (Deschutes River watershed) in central Oregon. The researchers would use backpack electrofishing units and screw traps to capture the fish which would then be measured, weighed, checked for marks and tags, allowed to recover, and released back to the river. A subsample of the captured fish may also be tissue-sampled for genetic assays. The purpose of the research is to establish baseline population information (presence, abundance, density, etc.) on MCR steelhead and native redband trout in the

vicinity of Bowman Dam, on the Crooked River. The work will benefit the species by helping managers maintain and operate Bowman Dam (and a possible new hydroelectric turbine proposed for construction there) in the most fish-friendly manner possible. The researchers do not intend to kill any of the fish being captured, but a small number may die as an unintended result of the activities.

23843

The Skagit River System Cooperative (SRSC) is seeking a five-year permit to capture juvenile PS Chinook salmon and PS steelhead in the Skagit River floodplain between river miles 54 and 79 (Skagit County, WA). The purpose of the study is to evaluate a restoration action designed to reconnect 1,700 acres (about 6.88 km<sup>2</sup>) of Skagit River floodplain (Barnaby Slough) by monitoring its effect upon salmonid densities and productivity. Barnaby Slough was used as a rearing pond for hatchery steelhead by the Washington Department of Fish and Wildlife from the 1960's until 2007 and includes three dams, numerous dikes, and a smaller enclosed rearing pond. These features modify flow conditions and block fish passage to the slough and are slated for removal and restoration. This study will employ a Before-After-Control-Impact design with two years of pre-project and three years of post-project monitoring to evaluate fish and habitat relationships. This research would benefit the affected species by informing future restoration designs as well as providing impetus for future enhancement projects. The SRSC proposes to capture fish using fence-weir smolt traps and backpack and boat electrofishing equipment. Fish would be captured, identified to species, measured, fin clipped (caudal fin), dyed, and released. Observational methods such as snorkel and redd surveys would be used to inform and supplement the above methods. The researchers do

not propose to kill any of the listed fish being captured, but a small number may die as an unintended result of the activities.

This notice is provided pursuant to section 10(c) of the ESA. NMFS will evaluate the applications, associated documents, and comments submitted to determine whether the applications meet the requirements of section 10(a) of the ESA and Federal regulations. The final permit decisions will not be made until after the end of the 30-day comment period. NMFS will publish notice of its final action in the **Federal Register**.

Dated: July 21, 2020.

**Angela Somma,**

*Chief, Endangered Species Division,*

*Office of Protected Resources, National Marine Fisheries Service.*

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